



5.0 FINDINGS

5.1 TOPOGRAPHY AND DRAINAGE

Review of the U.S. Geological Survey Jersey City, NJ-NY and Brooklyn, NY Quadrangles reveals ground elevation within the Project Area typically ranges from 0 to 30 feet above Mean Sea Level (MSL) in the vicinity of the canal. Ground elevation rises to 50 MSL in the Red Hook and Carroll Gardens neighborhoods north of the canal and 30 to 150 MSL in Park Slope, to the southeast. The Gowanus Canal receives drainage from the north, south, east, and west and is the surface-water receptor within the Project Area.

The only source of fresh water to the canal is through sheet flow and the CSO's. There are 12 permitted CSO's that discharge to the Gowanus Canal. Eight CSO's are from the Red Hook Water Pollution Control Plant (WPCP) service area and four CSO's are the Owls Head WPC service area (NYCDEP 2003).

5.2 GOWANUS CANAL COMMUNITY DEVELOPMENT CORPORATION

The GCCDC is extremely active in addressing the revitalization of the Gowanus Canal and its neighborhoods. The GCCDC has sponsored numerous studies and led task forces for the purpose of developing plans to enhance the area. In completing this ESA, GCCDC files were reviewed (see the Literature Search in Appendix A) and interviews were conducted with GCCDC staff. Additionally, GCCDC staff was present for one day of the field reconnaissance.

5.3 HISTORICAL USE INFORMATION

5.3.1 Historic Insurance Maps and Street Atlases

Historic maps and atlases were reviewed to identify past land use along the Gowanus Canal. Facilities presumed to have the greatest environmental impact on the Gowanus Canal, include manufactured gas plants (MGP), petroleum bulk-storage (PBS) facilities, chemical manufacturers, metal smelters, and coal yards.

5.3.1.1 Former Manufactured Gas (Coal Gas) Sites

Gas works facilities operated from the late 1800's to the mid 1900's, producing gas for lighting, cooking, and heating through forcing steam to pass through coal (and later heavy oil) to generate a usable gas. Waste products from this process consisted of benzene, pyridine, creosols, naphthalene, toluene, hydrogen sulfide, phenols, and coal tar (Roux 1990). The tar was generally sold to chemical plants or paving companies, wherever the remaining by-products were disposed of as waste (Roux 1990).

The following sites of Former MGPs are identified in the EDR (2004) report as being within one mile of the Gowanus Canal and within the Project Area:

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Coal Gas Facilities

- Fulton Municipal Gas Co., 263 Nevins Street – Site currently contains outdoor recreational facilities built in the 1950's.
- Brooklyn Union Gas Co., 157 Second Avenue – Site is the Lowes retail facility.
- Metropolitan Gas Light Co., 35 12th Street – Site is the Pathmark Supermarket.
- *Citizens Gas Light Co., 437 Smith Street* – Site is the area known as Carroll Gardens – Public Place.

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5.3.1.2 Former Coal Yards

Review of the Atlas of the Borough of Brooklyn (Hyde) revealed sites that do not show up on any current databases that were once the site of coal companies or coal yards. Soil at these properties may be contaminated by heavy metals leaching from bulk coal storage.

- *Scranton Lehigh Coal Company, 242 Nevins Street* – Warehouses and several small businesses at the site.
- *L1 3rd Street* – Site is currently vacant, but of interest to the GCCDC (2003b) as a potential walkway site.
- *201-225 3rd Street* – Site is currently a parking area for Verizon.
- *176-186 3rd Street* – Site is the location of Red Hook Crushers.
- *Moton Coal and Cooper's Seaboard Coke, 300-318 Nevins Street* – Verizon.

5.3.1.3 Former Petroleum Bulk Storage

Review of the Atlas of the Borough of Brooklyn (Hyde) revealed sites that do not show up on any other databases that were once the site of PBS. Soil at these properties has the potential to be contaminated from spills or leaky tanks while operating as a PBS.

- *Standard Oil of NY, 365 Bond Street* – Site of USA Van Lines and Fiberwave.

5.3.2 Newspaper Articles

The New York Times archives from 1857 – present were reviewed for items pertaining to the Gowanus Canal.

5.3.2.1 Fires and Explosions

Four significant fires were reported in the New York Times. In 1894, a grease tank exploded at the foot of 8th Street razing the oil refining facility (Davis Oil) and neighboring tenements houses (NY Times 1894). In 1930, Ernst Zobel Company, a chemical and pitch manufacturer at 10th Street and 2nd Avenue, burned to the ground. Hundreds of drums of benzene and turpentine, and sacks of resin were destroyed in the fire (NY Times 1930). The canal caught fire in 1946, when gasoline that had leaked into the water was ignited by an acetylene torch (NY Times 1946). And in 1976, a massive fire at the Patchogue Oil Terminal (currently Amerada Hess) destroyed underground fuel tanks and resulted in

millions of gallons of petroleum (Nos. 2 and 6 fuel oil) entering the Gowanus Channel and Bay (Thomas 1976).

5.3.2.2 Water Pollution

Articles describing the pollution of the canal date back as far as 1893, where in one article the canal was called, "A Disgrace to Brooklyn," due to it being the repository for untreated sewage and industrial wastes (NY Times 1893). In 1924, the NY Board of Fire Underwriters called the canal a "conflagration hazard", due to concentrations of waste oil in the canal (NY Times 1924). In 1951, Brooklyn Union Gas was fined \$750 for polluting the tidal waters of the Gowanus Canal by failing to repair a defective bulkhead that permitted oil to drip into the canal. It was argued by the prosecutor that the pollution had occurred on numerous occasions between October 1949 and July 1951 (NY Times 1951).

5.4 STANDARD ENVIRONMENTAL RECORD SOURCES

5.4.1 Electronic Database Searches

5.4.1.1 EDR

A copy of the EDR DataMap™ Area Study (2004) is provided in Appendix B. No listings were found in the Federal NPL, Proposed NPL, CONSENT, ROD, Delisted NPL, HMIRS, MLTS, MINES, MPL Liens, US BROWNFIELDS, DOD, TSCA, or SSTS databases or the state SWTIRE, HSWDS, and DEL SHWS databases. Records were identified in other Federal and state databases pertaining to over 400 incidents and (or) facilities. Many of these records concern sites that are outside of the Project Area, or minor spills that are not material to the findings of this report. As noted in Section 1.2, the scope of this ESA is limited to environmental conditions within the Project Area. Therefore, only the records pertaining to major sites or incidents occurring within the Project Area are discussed in this report.

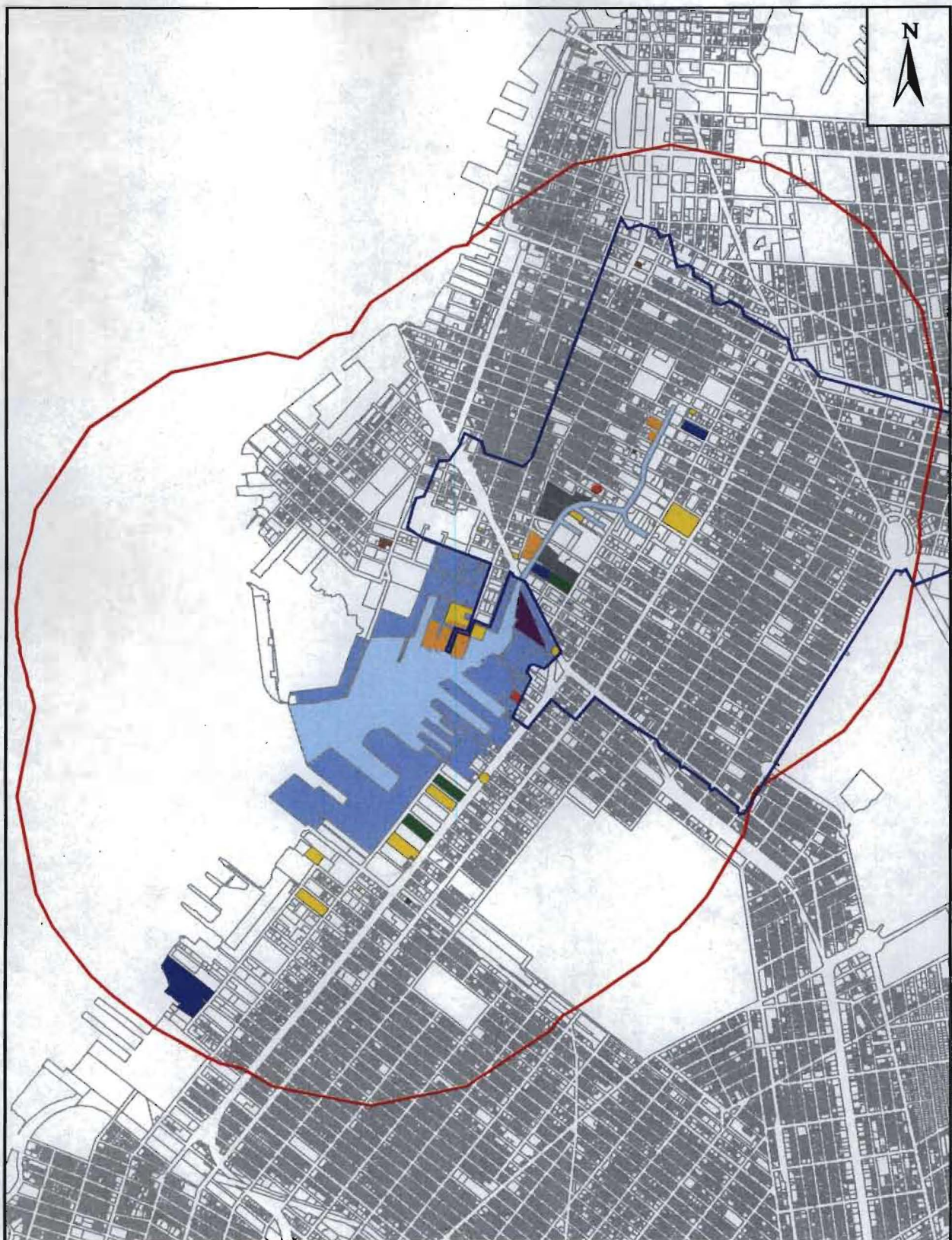
Figure 3 maps the major facilities identified within the Project Area. For the purposes of this ESA, major facilities are those listed in CERCLIS, CERCLIS-NFRAP, CORRACTS, RCRIS-LQG, or MOSF-UST databases. Figure 3 also depicts the location of Former MGPs and sites listed in the NY VCP – Brownfields database.

The results presented in the EDR Report suggest that discharges of petroleum and other environmental contaminants have occurred at most of the major facilities depicted on Figure 3. Specifically, spills and contaminated soils have been reported at the Brooklyn Union Gas, Amerada Hess, Bayside Fuel Depot, Witco Chemical, U.S. Food and Drug Administration, and Ulano Corporation sites. Additional information concerning these facilities was obtained from the NYSDEC file review, and is presented where applicable in Section 5.5.

5.4.1.2 Toxic Targets

400 (spills, leaking USTs) - 1 mile
Toxics Targeting Computerized Reports (Toxic Targeting 2000a and 2000b) were generated in June 2000, for the north and south sections of the Gowanus Canal. Toxic Targeting searches only 17 Federal and state databases. Similar to the EDR Report, no listings were

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Source: Bytes of the Big Apple,
New York City,
Department of City Planning; 2003.

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1000 0 1000 2000 3000 Feet

LEGEND

- Drainage Boundary
- Gowanus Canal, Channel, and Bay
- Outside of NYCDEP Collection System
- Block and Lot Boundaries
- EDR Search Limit
- NY VCP - Brownfields Database
- Former Manufactured Gas (Coal Gas) Sites
- RCRIS-LQG
- CORRACTS-RCRA Corrective Action Activity
- CERCLIS-NFRAP
- CERCLIS
- MOSF
- Not in Scope

Figure 3. Major Facilities Identified for the Phase One Upland Site Assessment for the Gowanus Canal and Bay Ecosystem Restoration Project, Kings County, New York.

Prepared By:



U. S. Army Corps of Engineers,
New York District

Date:

07/04

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identified for the NPL database. Also similar to the EDR Report, close to 400 incidents of spills or leaking underground storage tanks (UST's) were recorded within one mile of the Gowanus Canal.

5.4.2 NYSDEC File Review

Additional information regarding recognized environmental conditions within the Gowanus Canal and Bay Watershed was obtained from a manual review of publicly accessible files maintained by NYSDEC. An initial Freedom of Information Law (FOIL) request was sent to the NYSDEC on 12 March 2004, requesting information concerning 350 properties bordering the Gowanus Canal and Bay. The NYSDEC assigned the request FOIL Identification No. R2-03-1529, and further indicated that the request was too broad. The NYSDEC requested that subsequent requests include names and addresses of facilities to be investigated, and to limit the number of sites to two (2) per request (Appendix C). Subsequently, modifications to the FOIL request were filed on April 28, 2004, for 20 facilities located in the immediate vicinity of the Gowanus Canal and Bay. The subsequent requests were assigned FOIL Identification Nos. R2-04-153 through -162. The FOIL request was distributed by the NYSDEC to the Hazardous Waste and Solid Materials (HWSM), Site Remediation, Spills, and Air Permitting Divisions. A file review was conducted in June 2004, at the NYSDEC Region 2 offices located at 1 Hunter's Point Plaza, Long Island City, New York.

5.4.3 NYCDEP File Review

A written request was sent via certified mail to the Commissioners Office at the New York City Department of Environmental Protection (NYCDEP) on April 27, 2004, outlining the nature and purpose of this ESA, and requesting assistance in arranging for a file review in connection with the Gowanus Canal and Bay Watershed. According to the NYCDEP, the agency does not have any information relevant to the request.

5.5 POTENTIAL CONTAMINATION SOURCES

The following facilities have been identified as potential sources of contamination to the Gowanus Canal or Bay due to the nature of their operations or history of spills, leaky tanks, or contaminated soils. Facilities/properties are presented, in the following sections, according to which database they were listed in the EDR report. Properties listed in more than one database are discussed once in the category as they are presented below. Potential contamination from each site is summarized based on information provided in the EDR report and supplemented with other sources as appropriate. The databases in the discussion that follows are ordered by the potential for contamination. The higher potential databases are presented first.

5.5.1 Comprehensive Environmental Response, Compensation and Liability Information System

5.5.1.1 National Priorities List

① The Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) contains data on potentially hazardous waste sites that have been reported to the USEPA pursuant to Section 103 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). CERCLIS contains sites on or proposed to be on the National Priorities List (NPL).

- **Hamilton Avenue Incinerator, 555 Hamilton Avenue** – This property is located on the Gowanus Canal just southeast of Hamilton Avenue. Potential contamination from the site was discussed in Hamilton Avenue Modified MTS EIS (NYCDOS 2000). The EIS identified areas for concern regarding hazardous materials as:
 - ♦ probability of asbestos-containing materials in the incinerator building;
 - ♦ probable underlying layers of lead-based paint on the incinerator building; and,
 - ♦ possibility of underground fuel oil storage tanks.

Planned modifications to the site for the operation of a Marine Transfer Station included provisions for addressing encountered hazardous materials.

5.5.1.2 CERCLIS- No Further Remedial Action Planned

CERCLIS sites designated as No Further Remedial Action Planned (CERCLIS-NFRAP) are sites that have been removed from CERCLIS. These include sites where investigations concluded that no contamination is present, contamination is not serious enough for NPL consideration, or clean up has occurred rapidly enough to not require NPL status.

- ⑤ see list on p. 24
- **Vidan Auto Salvage, 327-321 Bond Street NYD986961167** – This site is a former Automotive “chop shop” and chemical dumping site under Attorney General investigation. Assessment of the site was completed and site archived as of 09/30/1999 (EDR 2004).
 - **Brooklyn Union Gas/Metropolitan, 2nd Ave & 12th Street/Gowanus NYD980532006** – One by-product produced during plant operational years was hydrocarbon tars, which was temporarily stored on site until sold. According to BUG, when plant was decommissioned in 1948, remaining tar was removed and the facility was razed. Assessment of the site was completed and site archived as of 09/24/1986 (EDR 2004). This is the site of the Pathmark and Lowes retail establishments.
 - **Brooklyn Union Gas/Citizens Gate, 6th Street & 2nd Avenue NYD980532212** – In 1981, PCB was identified as a component of condensate in the pipeline. Assessment of the site was completed and site archived as of 09/24/1986(EDR 2004).
 - **U.S. Information Agency, 29th Street and 3rd Avenue NY4470000635** – Assessment of the site was completed and site archived as of 12/31/1989 (EDR 2004).

- **Blatchford Base Plant, 32 33rd Street NYD980531644** – Assessment of the site was completed and site archived as of 09/22/1987 (EDR 2004).

5.5.2 Resource Conservation and Recovery Act

Resource Conservation and Recovery Act (RCRA) gives the EPA the authority to control hazardous waste from "cradle-to-grave." This authority includes the generation, transportation, treatment, storage, and disposal of hazardous wastes. RCRA sets forth a framework for the management of non-hazardous wastes.

5.5.2.1 RCRA Corrective Action Activity

RCRA Corrective Action Activity (CORRACTS) lists handlers, showing their corrective action core events.

- ②
- **Patterson Chemical Co., Inc. 102 3rd Street NYD980592471** – 2002 NAICS Title: General Warehousing and Storage, General Freight Trucking, Local. Facility or area was assigned a low corrective action priority on 05/27/1994 and the RFA was completed on 09/20/1994 (EDR 2004).
 - **Debevoise Co. – 74 20th Street NYD091590471** – In addition to being listed as a CORRACTS facility, this facility is also listed as a RCRA transport, storage, or disposal facility. There are four violation records reported at this site. The regulations violated are not reported. Areas of Violation determined were TSD-Other Requirements (Oversight) on 06/15/1982, Generator-All Requirements (Oversight) and Formal Enforcement Agreement on 11/10/1983, and Generator-All Requirements (Oversight) on 01/03/1985. Final monetary penalties were imposed and compliance achieved on 11/09/1982, 12/10/1983, 11/30/1984, and 03/21/1985 (EDR 2004).

5.5.2.2 Resource Conservation and Recovery Information System – Large Quantity Generator

Resource Conservation and Recovery Information System – Large Quantity Generator (RCRIS-LQG) includes selective information on sites, which generate over 1,000 kilograms of hazardous waste or over 1 kilogram of acutely hazardous waste from the generator off-site to a facility that can recycle, treat, store, or dispose of the waste. Fifteen (15) RCRIS-LQG's, found within the Project Area are described below. All RCRIS-LQG sites are considered suspect for the potential to have contamination and are depicted on Figure 3.

Of the 15 RCRIS-LQG's listed, violations were reported at only seven of the facilities. The following is a summary of the facility and the reported violations.

- 15
- **Citizens Gate Station 77 6th Street NYD987040631** – Violations have been recorded at this facility, although the regulation violated is not recorded. The Area of Violation determined by the EPA was Generator-All Requirements (Oversight) on 03/18/1993. A final monetary penalty of \$57,750 was imposed on 03/18/1994 (EDR 2004).

As of reporting year 2001, the facility reports generating annually 10,700.9 lbs of ignitable, petroleum solvent and 10,700.9 lbs of benzene (EDR 2004).

- *Consolidated Edison Company, Inc. (Con Ed), 222 First Street NYD000706218* – Violations of 6 NYCRR 373-3.2(g)(2) have been recorded at this facility. The Area of Violation determined was Generator-All Requirements (Oversight) on 10/24/2003. Compliance was achieved on 12/04/2003 (EDR 2004).

As of reporting year 2001, the facility reports generating annually 6,850,483.3 lbs of lead, 1,079 lbs of silver, 11 lbs of mercury, and 352 lbs of benzene (EDR 2004).

NYSDEC manual file review:

- Con Ed requested that the NYSDEC issue a No Further Action for soil remediation and for permission for that Con Ed to stop groundwater sampling for PCBs after six months as long as results show compliance with water quality standards in the areas where the 14 USTs were removed between March 2002 and August 2003 (Gonzalez 2004).
- Between March 2002 and August 2003, 14 USTs that once contained oil, gasoline, dump oil, and dielectric fluid were uncovered, cleaned, and removed. Soil in the vicinity of the USTs was excavated to the practical maximum extent and transported off-site. Most of the soil was disposed of as PCB hazardous waste. The remaining soil was disposed of as petroleum contaminated soil. Representatives of the facility feel no further soil remediation activities are necessary. In October 2003, three groundwater monitoring wells were installed at the site. Groundwater samples from February 2004 indicated concentrations of benzene, isopropyl benzene, and n-propylbenzene above NYSDEC standards. The facility proposes that groundwater be sampled on a quarterly basis for the next year and analyzed for VOC and SVOC parameters (Jacques Whitford Company, Inc. [JWC] 2004).
- Approximately one (1) gallon of petroleum-based product was encountered while digging a test well. The spill was related to old USTs found during excavation of a new facility at the site. Twenty-five (25) gallons of soil was removed and the area was barricaded. Clean up was pending test results. Several USTs were found during subsequent excavating activities (NYSDEC 2003).
- Soil samples in the immediate areas of four former USTs contained multiple VOCs and naphthalene at concentrations higher than NYSDEC's Spill Technology and Remediation Series (STARS) Petroleum-Contaminated Soil Guidance Policy. In addition, groundwater samples contained several VOCs and SVOCs as well as lead at concentrations higher than NYSDEC groundwater standards (JWC 2001).
- A previous NYSDEC file review of all available documents by JWC (2001) found that the site had six reported spills. Three of the spills involved contaminated soil around USTs, the other spills were elevated VOC levels observed while installing a well, a vehicle being overfilled while refueling, and the presence of a diesel sheen in a trench for a new gas fuel line. In addition, JWC (2001) found that two gasoline USTs were closed in 1994.
- Four USTs, two diesel fuel tanks and two gasoline tanks, were removed from the site. Soil containing petroleum was removed from the site as part of the closure activities. Soil samples were taken in the immediate areas of the former USTs.

Samples from two of the locations contained VOCs and SVOCs at concentrations higher than NYSDEC's STARS guidance values, whereas samples from the other two locations contained VOCs and SVOCs concentrations that were generally lower than method detection limits. In addition, a groundwater sample contained VOCs at concentrations higher than NYSDEC groundwater standards (Con Ed 1998).

- **Argus Division Witco Chemical Corp., 688 Court Street NYD003907367** – Violations of non-reported regulations have been recorded at this facility. The Area of Violation determined was Generator-All Requirements (Oversight) on 04/17/1985, 09/11/1992, and 12/15/1993. The EPA on 07/18/2000 imposed final monetary penalties of \$95,000, and \$45,000 was imposed by the state on 05/24/2002 (EDR 2004).

Violations of 40 CFR 265.1085(c) have been recorded at this facility. The Area of Violation determined was Generator-All Requirements (Oversight) on 03/31/2000. Compliance was achieved on 04/29/2000 (EDR 2004).

EDR (2004) summary of bulk storage tanks:

- Two 1,500-gallon Nos. 1, 2, or 4 fuel oil UST's, two Nos. 5 or 6 fuel oil UST's (3,000-gallon and 7,600-gallon), and one 7,500-gallon empty UST's.
- One 8,000-gallon Nos. 5 or 6 fuel oil AST and one 940-gallon Nos. 1, 2, or 4 fuel oil AST.

EDR (2004) summary of reported spills, leaks, or contaminated soil:

- A spill of unknown petroleum was reported on 07/27/1988, as released to the sewer. The NYSDEC conducted an inspection and referred the matter to the SPDES Unit and the NYCDEP. It was determined that the cause of the spill involved the operation of the plant. NYCDEP Enforcement and Compliance imposed permit limitations and treatment requirements to prevent reoccurrence of problem.

NYSDEC manual file review:

- The NYSDEC and the New York State Department of Health (NYSDOH) made the determination that the proposed Dual-Phase, High Vacuum Extraction (DPHVE) remediation process was a viable means of remedial technology for the site. Additionally, the NYSDEC requested that the Crompton Corporation set up a meeting to discuss the possibility of expediting the negotiation of an Order of Consent with the NYSDEC on the premise that groundwater and soil monitoring data will be submitted to the NYSDEC for review and will continue until the NYSDEC notifies the Crompton Corporation otherwise (Kaminski 2002).
- A *Closure Plan* (Enviro-Sciences, Inc. [ESI] 2001a) was submitted to NYSDEC and the NYSDOH to initiate the process to certify closure of the Witko plant and begin remediation activities (Smith 2001).
- According to the *Closure Plan* (ESI 2001a), the Witko facility had approximately 100 ASTs of which only five contained hazardous waste.
- During March and April 2000, six VOCs (i.e., benzene, 1,2 dichloropropene, toluene, ethylbenzene, xylenes, and acetone) and three SVOCs (i.e., naphthalene, 2-methylnaphthalene, and phenol) were found in the soil at several different locations within the site at concentrations higher than the site-specific target

levels (SSTLs). Additionally, groundwater samples depicted elevated concentrations of benzene, xylene, and toluene, and concentrations of acetone, phenol, and naphthalene exceeding SSTLs. Between April and June of 2000, three monitoring wells had measurable amounts of separate phase hydrocarbons (SPH) During another sampling event in December 2000, several soil borings detected lead and cadmium at concentrations above their hazardous waste threshold. As such, 8 areas within the site were deemed candidates for DPHVE remediation (ESI 2001b).

- Plant closure activities began in September 1999. Fifteen (15) hazardous waste containers were closed in accordance with NYSDEC requirements and four USTs were closed in accordance with all local, state, and Federal regulations (ESI 2000)
- **U.S. Food and Drug Administration, 850 3rd Avenue NY0750600637** – Violations of non-reported regulations have been recorded at this facility. The Area of Violation determined was Generator-All Requirements (Oversight) on 10/19/1989. Final compliance was achieved on 05/24/1990 (EDR 2004).

EDR (2004) summary of reported spills, leaks, or contaminated soil:

- 200 gallons of No. 2 fuel oil was reported as spilled on 01/15/1994. The spill was a result of tank overflow. Supervisor gave wrong tank size, causing the overflow. NYCDEP arrived on the site in the afternoon and sand was applied to cleanup the fuel oil.
- **Con Ed-Gowanus Gas Turbine, 27th Street & 3rd Avenue NYD981182215** – Violations of non-reported regulations have been recorded at this facility. The Area of Violation determined was Generator-All Requirements (Oversight) on 06/18/1997. Final compliance was achieved on 07/21/1997 (EDR 2004).
As of reporting year 2001, the facility reports generating annually 22.05 lbs of lead, 22.05 lbs of cadmium, 10 lbs of mercury, and 22.05 lbs of chromium (EDR 2004).
- **Tekni-Plex, Inc., 68 35th Street NYD042023333** – Violations of non-reported regulations have been recorded at this facility. The Area of Violation determined was Generator-All Requirements (Oversight) on 11/14/1989. Final compliance was achieved on 03/02/1990 (EDR 2004).
- **Arthur Matney Company Incorporated, 4014 1st Avenue NYD981488216** – Violations of 6 NYCRRR 373-3.9(e), 373-3.2(g) have been recorded at this facility. The Area of Violation determined was Generator-All Requirements (Oversight) on 04/11/2002. A final monetary penalty of \$38,500 was imposed by the State on 07/03/2003 (EDR 2004).
Violations of 6 NYCRRR 372/373/374 have been recorded at this facility. The Area of Violation determined was Generator-All Requirements (Oversight) on 10/30/2003. Compliance was not reported (EDR 2004).

As of reporting year 2001, the facility reports generating annually 24,621.04 lbs of ignitable, petroleum solvent and 24,621.04 lbs of non-halogenated solvent (EDR 2004).

No violations are reported for the remaining eight facilities. However, there are reports of spills or leaking underground storage tanks (UST's) for a few of these facilities. Brief summaries of reported spills, leaks, or contamination are provided below.

- *Tanks To U, 233 Nevins Street NYR000114371*
- *NYSDOT, Hamilton Avenue & 16th Street E Wing NYR000017087*
- *Public Utilities Maintenance Inc., 93 14th Street NYR000117267*
- *NYSDOT Contract #259078, 201 2nd Avenue Gowanus Expressway NYR000110916*
- *MTA NYCT – Campbell Storage Facility, 532 Smith Street NYR000045898*
- *General Industrial Service Corp, 603 Clinton Street NYR000105270*
- *Yookel, Inc., 224 40th Street NYR000063487*
- *Spentonbush Red Star Co STE85, 671 Court Street NYR000062760* – Spill of diesel oil was reported on 12/17/1998. A sheen was observed on the Gowanus Creek by a tugboat Captain (Atlantic Star). An absorbent boom was put in place (EDR 2004).

5.5.2.3 Resource Conservation and Recovery Information System – Small Quantity Generator

Resource Conservation and Recovery Information System – Small Quantity Generator (RCRIS-SQG) includes selective information on sites that generate less than 100 kilograms of hazardous waste or less than 1 kilogram of acutely hazardous waste per month. Twenty-five (25) RCRIS-SQG's found within the Project Area are described below.

Three RCRIS-SQG's are also listed as Major Oil Storage Facilities (MOSF's); no violations are listed for these three facilities. The locations of these facilities are depicted on Figure 3. A summary of UST's and AST's are provided for each facility, along with descriptions of reported spills, leaking tanks, and/or contaminated soils.

- *Amerada Hess Corporation – 659-730 Court Street 1000352824*

EDR (2004) summary of bulk storage tanks:

- Four 5,000-gallon Nos. 5 or 6 fuel oil UST's, seven Nos. 1, 2, or 4 fuel oil UST's (179,256-gallon, 250,026-gallon, 1,378,020-gallon, 1,059,366-gallon, 1,380,372-gallon, 2,281,272-gallon, and 2,281,314-gallon), and seven empty UST's (four 54,000-gallon, two 72,000-gallon, and one 90,000-gallon) with no secondary containment, but with ground water wells for leak detection for a few of the tanks.
- Three Nos. 5 or 6 fuel oil AST's (4,331,880-gallon, 5,988,024-gallon, and 4,536,210-gallon), one 5945,100-gallon Nos. 1, 2, or 4 fuel oil AST, and one 1,080-gallon diesel AST. Except for the diesel tank, all other AST's have prefabricated steel dike secondary containment.
- One 2,000-gallon ethylene glycol AST.

EDR (2004) summary of reported spills, leaks or contaminated soil:

- Sixty-five (65) gallons of No. 6 fuel oil was spilled in the Gowanus Canal on 12/17/1986, due to equipment failure.

- ♦ One hundred and twenty (120) gallons of No. 4 fuel oil was spilled on land on 08/03/1990, when a pump was turned on while a check valve was being replaced. Spill was contained and cleaned up with speedy dry.
- ♦ Approximately 300 gallons of No. 2 fuel oil spilled on land on 12/21/1991, from a tank truck due to equipment failure.
- ♦ Seventy (70) gallons of No. 6 fuel oil leaked on to truck and loading rack drain system on 01/13/1992, due to human error.
- ♦ Approximately 300 gallons of No. 6 fuel oil spilled to the Gowanus Bay on 02/01/1992. The cause of the spill was not reported.
- ♦ Approximately 100 gallons of No. 6 fuel oil spilled on land on 01/24/1994, when a rope got hung up in the loading dock, causing a truck to overfill.
- ♦ On 01/16/1995, a sheen was reported in the vicinity of the facility. When hazmat contractor arrived, the sheen had dissipated.
- ♦ Soil contaminated with No. 6 fuel oil was discovered on 01/31/1995, presumed to have come from an underground line leak.
- ♦ Thirty (30) gallons of No. 2 fuel oil spilled on land on 01/19/1999, due to a broken fitting on the tank.
- ♦ Twenty-five (25) gallons of No. 2 fuel oil was released to land on 03/04/1999, reported due to human error.
- ♦ Fifty-eight (58) gallons of No. 6 fuel oil spilled on 11/14/2001 when the loading arm came out of the truck.
- ♦ Fifty-nine (59) gallons of diesel was reported spilled on land due to a tank overfill on 01/03/2002.
- ♦ Twenty-five (25) gallons of No. 6 fuel oil was spilled on land on 01/18/2002, from a tank overfill.
- ♦ Ten (10) gallons of No. 4 fuel oil was reported spilled on land on 12/03/2003.
- ♦ Fifty (50) gallons of No. 2 fuel oil was spilled on land on 02/02/2004.

In 1976, a massive fire at this site destroyed underground fuel tanks of the Patchogue Oil Terminal and resulted in millions of gallons of petroleum (Nos. 2 and 6 fuel oil) spilled and discharged to the Gowanus Channel and Bay (Thomas 1976).

• ***Bayside Fuel Oil Depot – 510 Sackett Street 1000382088***

EDR (2004) summary of bulk storage tanks:

- ♦ Two Nos. 1, 2, or 4 fuel oil UST's (1,500,000-gallon and 1,000-gallon) with no secondary containment, but with ground water wells for leak detection. Tanks tested 12/03/1998.

EDR (2004) summary of reported spills, leaks or contaminated soil:

- ♦ The barge, Gowanus Trader, developed a leak of 25-gallons of No. 2 fuel oil on 01/25/1991. NYCFD and the USCG responded to the site and deployed a boom and absorbents to trap spill.
- ♦ On 06/26/1996, drums containing an unknown petroleum product were found leaking at the facility.

• ***Bayside Fuel Oil Depot – 527-539 Smith Street 1001224101***

EDR (2004) summary of bulk storage tanks:

- Two Nos. 5 or 6 fuel oil UST's (500,010-gallon and 390,012-gallon), one 200,004-gallon Nos. 1, 2, or 4 fuel oil UST, and 10 empty UST's (eight 15,000-gallon, one 18,000-gallon, and one 28,000-gallon) with no secondary containment, but with ground water wells for leak detection.
- Four Nos. 1, 2, or 4 fuel oil AST's (two 448,182-gallon and two 3,000-gallon).

EDR (2004) summary of reported spills, leaks or contaminated soil:

- Tank test failure of a 15,000-gallon No. 2 fuel oil UST on 11/26/1990.
- Tank test failure of a No. 6 fuel oil tank on 09/10/1991.
- Two gallons of No. 2 fuel oil spilled when the driver overfilled the tank truck on 02/08/1996. Spill cleaned up with absorbents.
- Fifty gallons of No. 4 fuel oil was spilled on 03/05/1993, when the transfer hose fell out of the manway on storage tank. Vacuum truck and sorbent pads were used to clean up spill.
- Two hundred gallons of No. 4 fuel oil was spilled on 02/24/1998, when a tank truck moved while loading and ripped the hose out. The spill was contained in the oil separator trough.

Of the remaining 22 RCRIS-SQG's, violations were reported at only four facilities. The following is a summary of the facility and the reported violations.

- (4)
- **Olympic Environmental Services, 107 6th Street 1000302326** – One violation of non-reported regulation has been recorded at this facility. The Area of Violation determined was Generator-Manifest Requirements on 09/08/1987. Final compliance was achieved on 09/10/1987 (EDR 2004).
 - **Brooklyn Coatings, Inc, 254 36th Street 1000333155** – One violation of non-reported regulation has been recorded at this facility. The Area of Violation determined was Generator-All Requirements (Oversight) on 04/14/1988. Final compliance was achieved on 04/06/1990 (EDR 2004).
 - **Kentile Floors, 58 2nd Avenue 1000411709** – One violation of non-reported regulation has been recorded at this facility. The Area of Violation determined was Generator-All Requirements (Oversight) on 04/27/1987. Final compliance was achieved on 07/10/1987 (EDR 2004).

EDR (2004) summary of bulk storage tanks:

- Four Nos. 1, 2, or 4 fuel oil UST's are closed in-place at the property.
- The 6,000-gallon tank was inspected on 02/01/1989 and closed 12/01/1992.
- Three tanks (two 1,500-gallons and one 1,000-gallon) closed; date not reported.
- **Ulano Corporation, 225 Butler Street** – Five violations of non-reported regulations have been recorded at this facility. For four of the violations, the Area of Violation determined was Generator-All Requirements (Oversight) on 08/15/1984, 07/06/1988, 12/04/1992, and 06/15/2000. The Area of Violation determined on 02/26/2001 was NYGCE. Final compliance was achieved 05/22/1985, 01/27/1989, 01/14/1993, 07/26/2000, and 06/01/2001, respectively (EDR 2004).

EDR (2004) summary of bulk storage tanks:

- One 1,000-gallon Nos. 1, 2, or 4 fuel oil UST is in-service with no secondary containment. The tank was tested on 04/01/1998.
- One 2,000-gallon UST with no secondary containment is closed with test data not reported.
- Two AST's, one 9,000-gallon Nos. 5 or 6 fuel oil in-service with vaulted containment and one closed 550-gallon Nos. 1, 2, or 4 fuel oil tank.
- Two 550-gallon unleaded gasoline UST's were removed.
- Three 4,000-gallon unleaded gasoline tanks and one 550-gallon Nos. 1, 2, or 4 fuel oil tank were closed and removed.
- One 550-gallon UST was converted to non-regulated use.

A tank test failure occurred on 03/12/1998 to a 10,000-gallon No. 2 fuel oil UST (EDR 2004).

No violations are reported for 18 RCRIS-SQG's. However, for a few of these facilities there are reports of spills or leaking underground storage tanks. Brief summaries of reported spills, leaks, or contamination are provided below.

- (18)
- **Home Depot USA, Inc, 550 Hamilton Avenue 1001818194**
 - **Triple One Cleaners, Inc., 111 3rd Street 1000122727**
 - **Giumenta Corp., 51 4th Street 1000789934**
 - **Pippin Enterprises, LTD, 220 3rd Street 1000790830**
 - **Chatham Cleaners, 280-282 Nevins Street 1000407106**
 - **Maaco Auto Painting & Body Work, 354-358 4th Avenue 1000174861**
 - **15th Street Auto Body, Inc., 28 15th Street 100446356**
 - **Industry City Associates, 241 37th Street 1004756417, 1000912611** – Two 6,000-gallon in-service Nos. 1, 2, or 4 fuel oil UST's with vaulted secondary containment. Tank was tested 04/01/1998 (EDR 2004).
 - **Regency Service Carts, 450 Union Street 1000296296** – Soil samples taken on 07/16/2001 revealed soil contaminated with No. 2 fuel oil. All water samples were clean (EDR 2004). Underground storage tank at rear of lot is abandoned and must be removed along with any contaminated soil. The entire site must be capped with two feet of clean fill due to potential contamination of old fill. (GCCDC).
 - **Wesley Laquer, 95 4th Street 1000282561** – During removal of six out-of-service CBS UST's, two 2-Propane and four Toluene, on 03/18/1999, there were elevated PID readings. The tanks were encased in concrete and soil was stockpiled (EDR 2004).
 - **Mobil Oil Corporation, 375 Hamilton Avenue 1000553814** – Two 4,000-gallon gasoline UST's failed tank tests on 08/22/1989. Contaminated soil was discovered 08/02/1993 during a subsurface investigation that followed a leakage alarm on 07/12/1993 (EDR 2004).
 - **Virginia Dare Extract Company, 882 3rd Avenue 1004760926** – A bottle of bromine was spilled on 09/11/1996 and cleaned by Hazmat contractor who disposed of the waste

(EDR 2004). Five-gallons of Dominion brominated vegetable oil overflowed from tank while bromine was being added to oil, on 03/13/1997 (EDR 2004).

- **Petroleum Tank Cleaners, 236 Butler Street 1000367193** – One in-service, 3,000-gallon Nos. 1, 2, or 4 fuel oil UST, three temporary out-of-service Nos. 5 or 6 fuel oil UST's (two 10,000-gallons and one 20,000-gallons), and one in-service Nos. 5 or 6 fuel oil AST (EDR 2004).
- **Bruno Truck Sales – 435 Hamilton Avenue 1000871903** – Three 1,000-gallon (storing lube oil and other product) and two 4,000-gallon (unleaded gasoline and diesel) temporary out-of-service UST's (EDR 2004).
- **Costco Wholesale Corp – 976-990 3rd Avenue 1001233115** – During removal of the underground storage tanks in 1995, it was discovered that two 4,000-gallon tanks removed had been leaking. An undetermined amount of No. 2 fuel oil may have leaked in to the surrounding soil (EDR 2004).
- **Penske Truck Leasing Company – 347 Bond Street 1000990241** – Soil borings revealed contamination with diesel oil. It was believed that over time the material was spilled, during the operations of the garage, and accumulated in the soil (EDR 2004).
- **Filmar Tank Cleaning Company – 107 6th Street 1000302326** – Ten (10) gallons of waste oil was spilled on 08/02/1994, when waste oil was transferred from tank to trailer that had a leak. Storage tanks have been cleaned and groundwater wells installed (EDR 2004).

5.5.2.4 Underground Storage Tank

Underground Storage Tanks (UST's) are regulated under subtitle I of RCRA. The database is from the NYSDEC's petroleum bulk storage database. Status of UST's and summaries of reported spills, leaks, or contamination are provided below.

- ⑤
- **Nick's Union Nevins Service Station, Corp., 301 Nevins Street U003128182** – Four 550-gallon UST's, temporary out of service (EDR 2004).
 - **Clarín Truck Leasing, Corp., 312 3rd Avenue U001839158** – Six 550-gallon in-service diesel UST's with vaulted secondary containment. Tank testing data are not reported (EDR 2004).
 - **NYCFD Engine 279 / Ladder 131, 252 Lorraine Street U001840024** – Three UST's, one 2,500-gallon Nos. 1, 2, or 4 fuel oil tank with vaulted secondary containment with access and two 275-gallon unleaded gasoline tank closed in place. Site also has an above ground 550-gallon diesel tank with a prefabricated steel dike as secondary containment. Tank testing data are not reported (EDR 2004).
 - **Zophar Mills, Inc., 112-130 26th Street U003644403, U003644490** – Five UST's, one 550-gallon tank, one 1,080-gallon tank, two 1,080-gallon Nos. 1, 2, or 4 fuel oil tanks, and one closed 1,080-gallon Nos. 1, 2, or 4 fuel oil tank. None of the tanks have secondary containment and tank testing data are not reported (EDR 2004).

- **GH Management, LLC, 66 4th Street U003749712** – Four 1,080-gallon tanks (three unleaded gasoline and one diesel) closed in place. Tank testing data are not reported (EDR 2004).

Soil samples from the site, contaminated with fuel oil, were reported to the NYSDEC in October 2001. Consultant determined that one of the UST's failed a tank test (EDR 2004).

5.5.3 New York State Databases

5.5.3.1 Leaking Storage Tank Incident Reports

Leaking Storage Tank Incident Reports (LTANKS) are an inventory of reported leaking storage tank incidents. Only one site on the LTANK database was not included in any of the site descriptions in the above sections (Sections 5.5.1 and 5.5.2).

- **U Haul Company of Metro NY, 213-259 6th Street S102672726** – Volatile organic compounds, later determined to be gasoline, was detected in soil borings during the removal of an underground storage tank in 1994 (EDR 2004).

5.5.3.2 Aboveground Storage Tank

The NYDEC maintains an Aboveground Storage Tank (AST) database as part of its PBS database. Only one site on the AST database was not included in any of the site descriptions in the above sections (Sections 5.5.1 and 5.5.2).

- **Miller Bros. Realty, 200 6th Street AST U003389384** – Active Petroleum Bulk Storage (PBS) facility with total PBS capacity at greater than 1,100 gallons for Nos. 1, 2, or 4 fuel oil (EDR 2004).

5.5.3.3 NY Spills

The NYSDEC maintains an active NY Spills list (SPILLS) pursuant to 6 NYCRR Sections 613.8 and 595.2. Only one site on the SPILLS database was not included in any of the site descriptions in the above sections (Sections 5.5.1 and 5.5.2).

- **B and R Auto Parts, Inc., 479-493 Hamilton Avenue S102663675** – The facility dismantles vehicles. A visual inspection of the site revealed contamination of the soil with waste oil. NYCDEP attempted to have facility install oil/water separators with further action to follow. Last update to the record was on 6/17/1998 (EDR 2004).

5.5.4 Sites Suspected Due to Current Use

The operations of the following facilities could have the potential to contribute contamination to the Gowanus Canal if appropriate environmental protection measures are not incorporated into their standard operation procedures. The following is a brief description of the three facilities.

- **Three G's Company, 551 Smith Street** – Facility operates scrap metal and concrete mixing businesses on the edge of the canal. Both business have the potential to

contribute to contamination of the canal if procedures for identifying hazardous materials within demolition materials are not employed and those materials are allowed to fall in to the canal (refer to the photographic documentation in Appendix D).

- **C. A. Properties, Corp., 110 2nd Avenue** – Facility operates a waste transfer facility located adjacent to the canal and between the 6th and 7th street turning basins. This facility has the potential to contribute to contamination of the canal if procedures for preventing containers from spilling and entering the canal are not employed.
- **NYCDEP Flushing Tunnel** – The Flushing Tunnel transports on average 200 million gallons of water a day from Buttermilk Channel to the Gowanus Canal. Contaminated water from discharges or accidental spills in Buttermilk Channel can be transported, unchecked, into the Gowanus Canal.

5.5.5 Under-utilized Properties

For the purposes of this report, under-utilized properties may be Brownfield sites or other properties that due to the presence of contamination, or the potential for contamination to be present, can not be developed to their full financial potential. Figure 4 depicts the sites in the Project Area identified as under-utilized sites.

5.5.5.1 Brownfields Sites

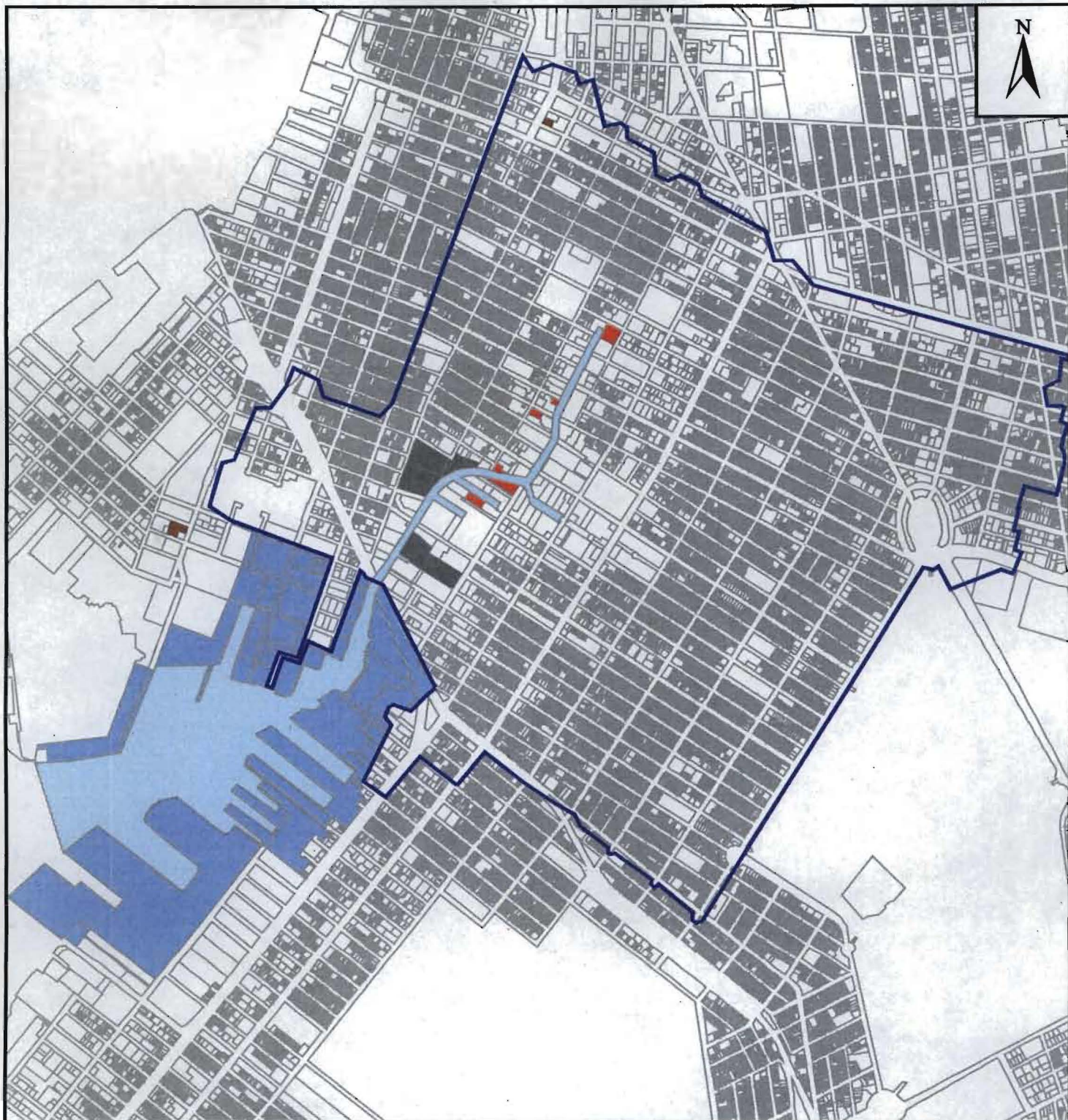
NY VCP – Brownfields Databases – Voluntary Cleanup Agreements. Private monies to get contaminated sites remediated to levels allowing for the site's productive use. The following sites are identified in the EDR (2004) report as being within 1 mile of the Gowanus Canal and within the scope of the project:

- ②
- **53 Boerum Place, 231-241 State Street** – VCP S106122303
 - **Vichar, Inc., 455 Smith Street (Carroll Gardens – Public Place)** – VCP S106122204

5.5.5.2 GCCDC Identified Sites

The GCCDC studied properties in the vicinity of the Gowanus Canal regarding their potential for qualifying as Brownfields. The following are a summary of six of the properties identified by the GCCDC as under utilized sites for further investigation as potential Brownfields sites (2003a):

- ⑥
- **226 Nevins Street** – The property is operated by Sanitation Repairs, Inc., Bridge Runners, MC and is used to park sanitation vehicles. There may be potential soil contamination due to the proximity of a 3,000 gallon fuel UST and a 7,000 gallon fuel AST located at 236 Butler St, described above in Section 5.5.2.3.
 - **426 Presidents Street** – The property is currently used as automobile storage. The surrounding lots are used for car parks across President St. to the north and factories & industrial buildings to the south. Potential for contamination exists from the location of



Source: Bytes of the Big Apple, New York City, Department of City Planning, 2003.



LEGEND

- | | |
|-------------------------------------|-------------------------------|
| Drainage Boundary | NY VCP - Brownfields Database |
| Gowanus Canal, Channel, and Bay | GCCDC Identified Sites |
| Outside of NYCDEP Collection System | Not in Scope |
| Block and Lot Boundaries | |

Figure 4. Under-utilized Sites Identified for the Phase One Upland Site Assessment for the Gowanus Canal and Bay Ecosystem Restoration Project, Kings County, New York.

Prepared By: U. S. Army Corps of Engineers
New York District

Date:
07/04

the property immediately on the canal where the soil and sediments could be impacted by unknown materials used as fill in creation of the canal, and from seepage of contaminated canal waters into the sites groundwater system. Additionally, the site is in proximity to Vidan Auto Salvage, a CERCLIS-NFRAP site discussed above in Section 5.5.1.2.

- **347 Bond Street** – There is one, one-story fireproof building that covers approximately half of the property. The structure was built in 1931, and is categorized as garage/gas station. The remaining half of the property (eastern portion) is vacant. EDR (2004) reports that soil borings revealed contamination with diesel oil that is believed to have been spilled over time when the property was operated as a garage.
- **421 Bond Street** – The land use at the property is industrial buildings and warehouse. There have been multiple permits issued for plumbing, sprinkler installation, and general construction through out the past five years. Potential for contamination exists from the location of the property immediately on the canal where the soil and sediments could be impacted by unknown materials used as fill in creation of the canal, and from seepage of contaminated canal waters into the sites groundwater system. Additionally, the site is in the close proximity to Public Place, a former MGP.
- **2-20 2nd Avenue** – The site is vacant and is being used for truck parking and turnaround by adjacent businesses. The site was formerly used by NYC Dept of Sanitation for the processing of solid waste and an interim transfer station, and the land may have received large amounts of raw garbage (PICCED 1987). The following toxic activities reportedly occurred either on or near the site: Active Tank Failure, Active Tank Test Failure, Active Hazardous Spill, Petroleum Bulk Storage Site, Hazardous Waste Generator/Transporter (Toxics Targeting 2000a). To the south, the properties are being used by IESI, a private asbestos transfer facility. Potential for contamination exists from the location of the property immediately on the canal where the soil and sediments could be impacted by unknown materials used as fill in creation of the canal, and from seepage of contaminated canal waters into the sites groundwater system.
- **89-97 9th Street** – The contiguous properties are used for parking and as a fueling station. The property directly south, on the other side of 6th St., is used for warehouse and manufacturing. In the past year this lot has been issued multiple permits for installing air conditioning units, gas meters, and gas fired space heating units. A permit for the construction of a 4,000 gallon diesel AST was issued in April 10, 2002. Potential for contamination exists from the location of the property immediately on the canal where the soil and sediments could be impacted by unknown materials used as fill in creation of the canal, and from seepage of contaminated canal waters into the sites groundwater system.